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Extension and Outreach

Integrated Crop Management

Downwind Buffers and Susceptible Crop Restrictions for New Dicamba Products

January 13, 2018

In response to problems with off-target movement and injury associated with dicamba applications on dicamba-resistant (Xtend) soybean, the EPA made significant changes to labels of the new dicamba products. While much of the discussion has focused on the Restricted Use designation and the requirement for applicators to receive dicamba-specific training, the EPA also clarified how downwind buffers and protections of susceptible crops are to be implemented.

Downwind buffers The labels state that a 110 ft downwind buffer must always be maintained from the field edge (a 220 ft buffer is required if a rate greater than 22 oz of Xtendimax w/VGT or FeXapan w/VGT is used). There are four areas that can be included in the buffer distance when they are **directly adjacent** to the field:

- 1) roads, paved or gravel surfaces,
- 2) planted ag fields planted to crops tolerant to dicamba (e.g. grasses, Xtend soybean),
- 3) ag fields prepared for planting, and,
- 4) areas covered by buildings or structures with walls and or roof.

The implication of this restriction is that in most situations, a portion of the field will need to be left untreated due to the downwind buffer (Figure 1). The EPA has clarified that the vegetation in the area between a field edge and a road is **not** considered part of the road; thus, if the wind is blowing toward a road, the buffer needs to be established in the field regardless of what is found in the field across the road. It does **not** matter whether the roadside vegetation is maintained with mowing or other management practices.

If permanent, perennial vegetation is present between two adjacent fields a downwind buffer will be required. The label states that downwind buffers are required at field edges;

thus, perennial vegetation found in terraces and waterways within fields do not require buffers.

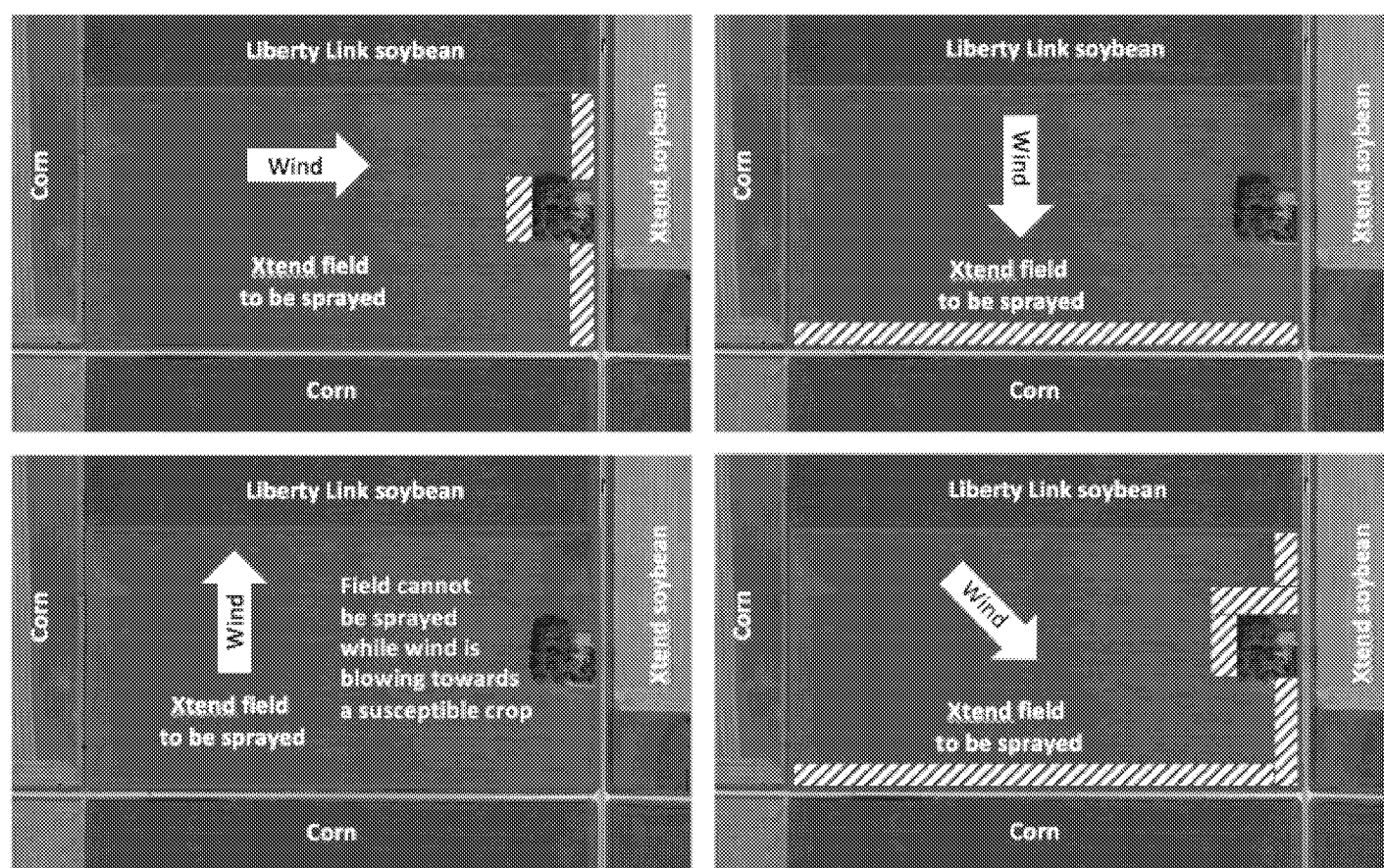


Figure 1. Influence of wind direction on restrictions regarding downwind buffers and susceptible crops when using dicamba on dicamba-resistant soybean.

Susceptible crops The labels state do not apply the product when wind is blowing towards adjacent susceptible crops. Soybean varieties without the dicamba-resistance trait are considered a susceptible crop; thus, users of the new dicamba products will need to determine whether soybean planted in adjacent fields are dicamba-resistant or not. The label does not specify a minimum distance required between treated fields and susceptible crops; however, a susceptible crop immediately across a road would be protected.

The requirements for downwind buffers and protection of susceptible crops add to the complexity of using dicamba in dicamba-resistant soybean. Users of the products need to carefully evaluate all fields prior to spraying season to determine where downwind buffers may be required and if susceptible crops are present in adjacent fields. Restrictions for downwind buffers and susceptible crops are not affected by wind speed; thus, they are required even with low wind speeds. The labels restrict applications to periods when winds are at least 3 MPH and less than 10 MPH.

The 2,4-D products (Enlist One and Enlist Duo) registered for use on 2,4-D resistant corn and soybean also have requirements for downwind buffers and susceptible crops.

However, the downwind buffer with the 2,4-D products is 30 ft rather than 110 ft specified for dicamba products. The products can not be applied if the wind is blowing towards commercially grown tomatoes, grapes, cucurbits or other fruiting vegetables.

Soybean varieties that do not possess the 2,4-D resistant trait are not considered a susceptible crop. At the time of publishing this article, Enlist soybean have not been approved for import by China.

Category: Weeds

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Crop:

Soybean

Tags: dicamba herbicide drift herbicide application Xtend soybean
dicamba resistant soybeans

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